

PROJECT ADMINISTRATION DATA SHEET

☒

ORIGINAL

☐

REVISION NO. _____

Project No. A-2939 *

DATE: 4/17/81 5/7/81

Project Director: Mr. D. J. Kozakoff ~~Research~~/Lab ENL/RSD

Sponsor: U. S. Army Missile Command; Redstone Arsenal, AL 35898

Type Agreement: Delivery Order No. 0015 under Contract No. DAAH01-81-D-A003

Award Period: From 4/17/81 To 9/30/81 (Performance) 11/30/81 (Reports)

Sponsor Amount: \$39,769.25 Contracted through:

Cost Sharing: None GTRI/SET

Title: Missile Radome Performance Assessment

ADMINISTRATIVE DATA

OCA CONTACT Duane Hutchison x 4820

Sponsor Technical Contact: Dr. M. M. Hallum; Systems Simulation and Development Directorate; U. S. Army Missile Command; Attn: DRSMI-RDF; Redstone Arsenal, AL 35898 205/ 876-4141

Sponsor Admin./Contractual Contact: Mr. Thomas A. Bryant; ONR Resident Representative; Georgia Institute of Technology; 206 O'Keefe Building; Atlanta, GA 30332

Reports: See Deliverable Schedule Security Classification: Unclassified

Defense Priority Rating: DO-A2 under DMS Reg. 1

RESTRICTIONS

See Attached DOD Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval - Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of \$500 or 125% of approved proposal budget category.

Equipment: Title vests with Government; except that items costing less than \$1,000 vests with GIT if prior approval to purchase is obtained from the Contracting Officer.

COMMENTS:

15
+ SUB. UNDER E 21-664

COPIES TO:

Administrative Coordinator
Research Property Management
Accounting Office

Research Security Services
~~Reports Coordinator (OCA)~~
Legal Services (OCA)

EES Research Public Relations ()
Project File (OCA)
Other:

SPONSORED PROJECT TERMINATION SHEET

Date 11/1/82

Project Title: Missile Radome Performance Assessment

Project No: A-2939

Project Director: Mr. Kozakoff

Sponsor: Redstone Arsenal

Effective Termination Date: 9/30/81

Clearance of Accounting Charges: 11/30/81

Grant/Contract Closeout Actions Remaining:

- ☒ Final Invoice ~~and Closing Documents~~
- ☐ Final Fiscal Report
- ☐ Final Report of Inventions
- ☐ Govt. Property Inventory & Related Certificate
- ☐ Classified Material Certificate
- ☐ Other _____

NOTE: Final Report delivered directly to sponsor.

Assigned to: EML (School/Laboratory)

COPIES TO:

Administrative Coordinator
Research Property Management
Accounting
Procurement/EES Supply Services

Research Security Services
Reports Coordinator (OCA)
Legal Services (OCA)
Library

EES Public Relations (2)
Computer Input
Project File
Other _____

A-2939

Monthly Technical Report No. 1 and No. 2
and
Monthly Cost and Performance Report No. 1 and No. 2

Report Period
April 17 through June 30, 1981

MISSILE RADOME PERFORMANCE ASSESSMENT

D.J. Kozakoff

Contract No. DAAH01-81-D-A003
Delivery Order No. 0015
EES Project A-2939

Effective Date: 4/17/81
Expiration Date: 9/30/81

Prepared for

U.S. Army Missile Command
Attn: DRDMI-ICBB/Lukens
Redstone Arsenal, Alabama 35809

Prepared by

Georgia Institute of Technology
Engineering Experiment Station
Atlanta, Georgia 30332

WORK PERFORMED DURING THIS REPORT PERIOD

A literature search to identify various radome computer analysis codes has been initiated. A meeting was held with the contract technical monitor to discuss study goals. Georgia Tech requested that MICOM supply mechanical descriptions and electrical data of selected radome types so that chosen computer programs could be exercised to provide a theoretical data base to provide a theoretical data base for comparison with the measured data.

PROBLEMS ENCOUNTERED

None

WORK TO BE PERFORMED DURING THE NEXT REPORT PERIOD

Evaluation of analysis methods will continue. Also, an attempt to implement and debug selected computer programs on the Georgia Tech Cyber Computer will be made.

Cost Information

The following charges have been incurred against the contract during period April 17 through May 31, 1981

	<u>Expended</u>	<u>Encumbered</u>
Personal Services (PS)	\$21.66	0
Materials and Supplies	18.00	0
Travel	55.67	0
Overhead (@ 73% of PS)	15.81	0
Retirement (@ 11.11% of PS)	<u>1.53</u>	<u>0</u>
TOTAL	\$112.67	0

The breakdown of personal services is as follows:

	<u>Dollars</u>	<u>Approximate Man Hours</u>
Principal Research Scientists/Engineers	0	0
Senior Research Scientists/Engineers	0	0
Research Scientists II/Engineers II	0	0
Research Scientists I/Engineers I	0	0
Technicians/Draftsmen	0	0
Students	7.88	1.3
Secretarial/Clerical/Other	<u>13.78</u>	<u>1.9</u>
TOTAL	\$21.66	3.2

The current financial status of the contract is as follows:

	<u>Budget As Proposed</u>	<u>Expended</u>	<u>Free Balance</u>
Personal Services (PS)	\$39,769.25	\$112.67	\$39,656.58
Materials and Supplies	2,399.50	18.00	2,381.50
Travel and Shipping	1,000.00	55.67	944.33
Computer	0	0	0
Overhead	14,606.82	15.81	14,591.01
Retirement	1,984.57	1.53	1,983.04
Encumbered	<u>0</u>	<u>0</u>	<u>0</u>
	\$39,769.25	\$112.67	\$39,656.58

FUNDING

Based on present full funding, the funding and equivalent man hours are sufficient to complete the task. Approximately .002% of the proposed task has been completed.

Cost Information

The following charges have been incurred against the contract during period June 1 through June 30, 1981

	<u>Expended</u>	<u>Encumbered</u>
Personal Services (PS)	34.44	0
Materials and Supplies	1.20	0
Travel	0	0
Overhead (@ 75% of PS)	25.14	0
Retirement (@ 11.11% of PS)	<u>3.83</u>	<u>0</u>
TOTAL	64.61	0

The breakdown of personal services is as follows:

	<u>Dollars</u>	<u>Approximate Man Hours</u>
Principal Research Scientists/Engineers	0	0
Senior Research Scientists/Engineers	0	0
Research Scientists II/Engineers II	0	0
Research Scientists I/Engineers I	0	0
Technicians/Draftsmen	0	0
Students	0	0
Secretarial/Clerical/Other	<u>34.34</u>	<u>4.7</u>
TOTAL	34.44	4.7

The current financial status of the contract is as follows:

	<u>Budget As Proposed</u>	<u>Expended</u>	<u>Free Balance</u>
Personal Services (PS)	13,185.58	56.10	13,129.48
Materials and Supplies	2,399.50	19.20	2,380.30
Travel and Shipping	1,000.00	55.67	944.33
Computer	0	0	0
Overhead	9,737.88	40.95	9,696.93
Retirement	1,323.05	5.36	1,317.69
Encumbered	<u>0</u>	<u>0</u>	<u>0</u>
	27,646.01	177.28	27,468.73

FUNDING

Based on present full funding, the funding and equivalent man hours are sufficient to complete the task. Approximately .00% of the proposed task has been completed.

A-2939

Monthly Technical Report No. 3
and
Monthly Cost and Performance Report No. 3

Report Period
July 1 through July 31, 1981

MISSILE RADOME PERFORMANCE ASSESSMENT

J
D.J. Kozakoff

Contract No. DAAH01-81-D-A003
Delivery Order No. 0015
EES Project A-2939

Prepared for

U.S. Army Missile Command
Attn: DRDMI-ICBB/Lukens
Redstone Arsenal, Alabama 35809

Prepared by

Georgia Institute of Technology
Engineering Experiment Station
Atlanta, Georgia 30332

WORK PERFORMED DURING THIS REPORTING PERIOD

A literature search to identify radome analysis and computer prediction codes has been in progress.

Dr. G.K. Huddleston of the School of Electrical Engineering has implemented a selected analysis code on the Georgia Tech Cyber. Modifications are being performed to model various radome types as defined by the contract's technical monitor.

A trip to MICOM was made to discuss progress with the contract technical monitor.

PROBLEMS ENCOUNTERED

None

WORK TO BE PERFORMED DURING THE NEXT REPORT PERIOD

Continue to evaluate available computer analysis approaches. Obtain measured data from MICOM to compare with theoretical predictions. The selected analysis approach(es) will be exercised to obtain radome performance prediction data.

Cost Information

The following charges have been incurred against the contract during period July 1 through July 31, 1981

	<u>Expended</u>	<u>Encumbered</u>
Personal Services (PS)	601.87	0
Materials and Supplies	0	0
Travel	54.05	0
Overhead (@ 75% of PS)	451.40	0
Retirement (@ 11.11% of PS)	66.87	0
	<u>1,174.19</u>	<u>0</u>
TOTAL		

The breakdown of personal services is as follows:

	<u>Dollars</u>	<u>Approximate Man Hours</u>
Principal Research Scientists/Engineers	0	0
Senior Research Scientists/Engineers	601.87	28
Research Scientists II/Engineers II	0	0
Research Scientists I/Engineers I	0	0
Technicians/Draftsmen	0	0
Students	0	0
Secretarial/Clerical/Other	0	0
	<u>601.87</u>	<u>28.00</u>
TOTAL		

The current financial status of the contract is as follows:

	<u>Budget As Proposed</u>	<u>Expended</u>	<u>Free Balance</u>
Personal Services (PS)	13,185.58	657.97	12,527.61
Materials and Supplies	2,399.50	19.20	2,380.30
Travel and Shipping	1,000.00	109.72	890.28
Computer	0	0	0
Overhead	9,737.88	492.35	9,245.53
Retirement	1,323.05	72.23	1,250.82
Encumbered	0	0	0
	<u>27,646.01</u>	<u>1,351.47</u>	<u>26,294.54</u>

FUNDING

Based on present full funding, the funding and equivalent man hours are sufficient to complete the task. Approximately 4.8% of the proposed task has been completed.

A-2939

Monthly Technical Report No. 4
and
Monthly Cost and Performance Report No. 4

Report Period
August 1 through August 31, 1981

MISSILE RADOME PERFORMANCE ASSESSMENT

D.J. Kozakoff

Contract No. DAAH01-81-D-A003
Delivery Order No. 0015
EES Project A-2939

Prepared for

U.S. Army Missile Command
Attn: DRDMI-ICBB/Lukens
Redstone Arsenal, Alabama 35809

Prepared by

Georgia Institute of Technology
Engineering Experiment Station
Atlanta, Georgia 30332

WORK PERFORMED DURING THIS REPORTING PERIOD

Milestones in August included debugging of a graphics program for data display. Also, work has begun on a program to convert the radome data obtained from MICOM which is in a random format to an interpolated matrix in 1 degree increments in azimuth and elevation.

PROBLEMS ENCOUNTERED

None

WORK TO BE PERFORMED DURING THE NEXT REPORT PERIOD

Effort will continue to evaluate computer approaches and compute performance of radome geometries defined by MICOM. In addition, a sub-program must be written to convert polar coordinate data which the current analysis program generates to an azimuth/elevation format so that measured and computed data may be compared.

Cost Information

The following charges have been incurred against the contract during period August 1-August 31, 1981

	<u>Expended</u>	<u>Encumbered</u>
Personal Services (PS)	\$3,656.85	0
Materials and Supplies	0	0
Travel	781.44	0
Computer	107.89	0
Overhead (@ 75% of PS)	2,737.08	0
Retirement (@ 11.11% of PS)	366.05	0
TOTAL	\$7,649.31	0

The breakdown of personal services is as follows:

	<u>Dollars</u>	<u>Approximate Man Hours</u>
Principal Research Scientists/Engineers	\$235.17	9
Senior Research Scientists/Engineers	2173.88	102
Research Scientists II/Engineers II	0	0
Research Scientists I/Engineers I	568.44	41
Technicians/Draftsmen	321.16	34
Students	40.25	7
Secretarial/Clerical/Other	317.51	43
TOTAL	3,656.85	236

The current financial status of the contract is as follows:

	<u>Budget As Proposed</u>	<u>Expended</u>	<u>Free Balance</u>
Personal Services (PS)	\$13,185.58	\$4,314.82	\$8,870.76
Materials and Supplies	2,399.50	19.20	2,380.30
Travel and Shipping	1,000.00	891.16	108.84
Computer	0	107.89	(107.89)
Overhead	9,737.88	3,229.43	6,508.45
Retirement	1,323.05	438.28	884.77
Encumbered	0	0	0
FUNDING	\$27,646.01	\$9000.78	\$18,645.23

Based on present full funding, the funding and equivalent man hours are sufficient to complete the task. Approximately 33 % of the proposed task has been completed.